i) in a first separation/purification stage,

a) digesting the cells containing nucleic acids, removing cell debris and thereafter subjecting the nucleic acids to anion exchange against an anion exchanger in a first buffer solution, which has a low ionic strength,

b) desorbing the nucleic acids from the anion exchanger [using] **by applying** a second buffer solution, which has a higher ionic strength than the first buffer solution, effecting purified nucleic acids in the second buffer solution; and

ii) in a second separation/purification stage,

c) adsorbing the separation/purified nucleic acids in the second buffer solution onto the surface of a mineral support material, optionally in the presence of lower alcohols, poly(ethylene glycol), or a mixture thereof, and

d) desorbing the nucleic acids from the mineral support material [using] **by applying** an eluant, wherein the eluant is water or a third buffer solution, which has an ionic strength lower than the second buffer solution, effecting twice-purified nucleic acids.

63. (Amended) The process according to claim 62, [wherein] **further comprising the step of**, prior to the digesting step, **subjecting** the cells [are subjected] to centrifugation or filtration in order to remove undissolved components.

64. (Amended) The process according to claim 62 further comprising, between the steps a) and b), one or more washing steps [using] **by applying** a fourth buffer solution, which has a low ionic strength, optionally increasing ionic strength per washing step.

65. (Amended) The process according to claim 62 further comprising, between the steps c) and d), one or more washing steps [using] **by applying** a fifth buffer solution, which has an ionic strength higher than the first buffer solution.

66. (Amended) The process according to claim 62 further comprising, between the steps c) and d), at least one washing step [using] **by applying** an aqueous alcoholic solution.

67. (Amended) The process according to claim 62 further comprising, between the steps c) and d), a washing step [using] **by applying** a solution having an ionic strength corresponding to a 1.5 molar sodium perchlorate solution and a pH of 5.

68. (Amended) The process according to claim 62, wherein the isolated and purified nucleic acid [comprises] **has** from 10 nucleotides to 200,000 nucleotides.

70. (Amended) The process according to claim 62, wherein the mineral support material is silica gel, glass, zeolite, aluminum oxide, titanium dioxide, zirconium dioxide, kaolin, or diatomacae[, or a combination thereof].

71. (Amended) The process according to claim 62, wherein the anion exchanger [includes] **has** a porous or non-porous matrix having a particle size of from 1 to 250 μm.

72. (Amended) The process according to claim 62, wherein the anion exchanger [includes] **has** a porous or non-porous matrix having a particle size of from 10 to 30 μm.

73. (Amended) The process of claim 67, wherein the aqueous alcoholic solution includes from 1 to 7 M sodium perchlorate, from 1 to 7 M guanidine-HCl, from 1 to 5 M sodium chloride, from 1 to 6 M sodium iodide, and 1 M sodium chloride [/] **in** 20% ethanol, propanol, isopropanol, butanol, poly(ethylene glycol), or [a] mixture thereof.

79. (Amended) The process of claim 62, wherein the eluant is a buffer solution that comprises water and Tris at a pH value of from 5 to 9.

(Add the following claim.)

81. The process of claim 62, whereby the nucleic acids are plasmid or genomic DNA.

REMARKS

The present claims are 62-68 and 70-81.